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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,967	09/16/2003	Hyun-Chul Kim	5649-1161	2684
20792	7590	06/26/2006	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			GUERRERO, MARIA F	
PO BOX 37428			ART UNIT	
RALEIGH, NC 27627			PAPER NUMBER	
			2822	

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,967

Applicant(s)

KIM, HYUN-CHUL

Examiner

Maria Guerrero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-29 is/are pending in the application.
- 4a) Of the above claim(s) 17-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-16 and 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed March 11, 2006.

Status of Claims

2. Claims 1-8 are canceled. Claims 9-29 are pending.

Election/Restrictions

3. Claims 17-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 14, 2005.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9-16 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Shih et al. (US 6,100,118).

Shih et al. shows forming an integrated circuit device (col. 6, lines 35-45). Shih et al. teaches forming a window layer on an integrated circuit substrate that defines a fuse region (Figs. 1-4, col. 6, lines 35-67). Shih et al. describes the window layer being formed at an upper portion of the integrated circuit device and recessed beneath a surface of the integrated circuit device (Figs. 1-4, col. 7, lines 54-60). Shih et al. discloses forming a buffer pattern between the integrated circuit substrate and the window layer (Figs. 1-4, col. 4, lines 20-60). Shih et al. shows forming a fuse pattern comprising a first conductive material between the buffer pattern (guard ring area) and the window layer (Figs. 1-4, col.4).

In addition, Shih et al. teaches forming a metal wiring on the integrated circuit substrate being more remote from the integrated circuit substrate than the window layer (Figs. 1-4, col. 6, lines 15-45). Shih et al. shows forming the buffer pattern (guard ring) by forming a first buffer pattern, a second buffer pattern, a first insulation layer between the first buffer pattern comprising a second conductive material and the fuse pattern, and a second insulation layer between the second buffer pattern comprising a third conductive material and the first buffer pattern (Figs. 1-4, col. 4, col. 7, lines 1-60). Shih et al. describes the window layer being formed by forming a third insulation layer on the first insulation layer, forming a passivation layer on the third insulation layer, and etching the passivation layer and the third insulation layer in the fuse region (Figs. 1-4, col. 4, lines 15-65, col. 7, lines 52—60, col. 8, lines 44-67, col. 9, lines 1-5).

Shih et al. also teaches the second and the third conductive materials are different from the first conductive material (col. 3, lines 40-65, col. 7, lines 10-14, 45-48). Shih et

al. shows the first and second buffer pattern being planar (Figs. 1-4). Shih et al. describes forming a line pattern between the integrated circuit substrate and the second insulation layer adjacent the second buffer pattern (Figs. 1-4, col. 4). Shih et al. teaches forming a contact hole in the first and second insulation layers that exposes a portion of the line pattern and forming a contact plug in a contact hole that electrically couples the fuse pattern to the line pattern (Fig. 1-4, col. 4, lines 15-60).

Furthermore, Shih et al. discloses forming a conductive layer pattern between the second insulation layer and the first insulation layer adjacent to the first buffer pattern (Figs. 1-4, col. 4, lines 15-55). Shih et al. teaches forming a metal wiring on the third insulation layer above the conductive layer pattern and forming a via hole in the first and third insulation layers that exposes a portion of the conductive layer pattern and forming a conductive plug in the via hole that electrically couples the conductive pattern and the metal wiring (Figs. 1-4, col. 4, lines 5-65, col. 11, lines 17-28). Shih et al. shows the integrated circuit device comprises an integrated circuit memory device (col. 1, lines 12-15, col. 6, lines 43-45).

In addition, the elements must be arranged as required by the claim, but this is not an *ipse dixit* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Response to Arguments

6. Applicant's arguments filed December 22, 2005 and April 11, 2006 have been fully considered but they are not persuasive. Claims 9-16 26-29 stand rejected in view

of Shih et al. because Applicant failed to provide any evidence of criticality or unexpected results and any special definition based on the claimed language.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the buffering function during a repairing process, which may reduce an impact applied to the substrate by a laser beam) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argued that Shih does not teach or suggest a buffer pattern as recited in claim 9. However, a person of ordinary skill in the art would recognize that the process described by Shih included the buffer pattern because the elements must be arranged as required by the claim, but this is not an *ipse dixit* test, i.e., identity of terminology is not required. In *re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Furthermore, Shih et al. shows forming the buffer pattern (guard ring) by forming a first buffer pattern, a second buffer pattern, a first insulation layer between the first buffer pattern comprising a second conductive material and the fuse pattern, and a second insulation layer between the second buffer pattern comprising a third conductive material and the first buffer pattern (Figs. 1-4, col. 4, col. 7, lines 1-60).

In addition, during patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." > In *re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). While the claims of issued

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patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. > In re American Academy of Science Tech Center, F.3d, 2004 WL 1067528 (Fed. Cir. May 13, 2004)(The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation.) < This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) >; Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004). Therefore, the words "between portions of the conductive layer pattern on the integrated circuit substrate" have been given a plain meaning.

Furthermore, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). >"When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." Brown v. 3M, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001). See also MPEP § 2131.02.

In addition, "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned.

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They are part of the literature of the art, relevant for all they contain." In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also Celeritas Technologies Ltd. v. Rockwell International Corp., 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir.1998).

Finally, the transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., > Invitrogen Corp. v. Biocrest Mfg., L.P., 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) ("The transition comprising' in a method claim indicates that the claim is open-ended and allows for additional steps."); < Genentech, Inc. v. Chiron Corp., 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); In re Baxter, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); Ex parte Davis, 80 USPQ 448, 450 (Bd. App. 1948) ("comprising" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts").

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

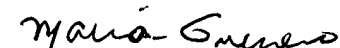
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Guerrero whose telephone number is 571-272-1837. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 22, 2006


MARIA F. GUERRERO
PRIMARY EXAMINEE